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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,030	12/11/2000	Majid Dadafshar	PULSE.091A	5487

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EXAMINER
DINH, TUAN T

ART UNIT	PAPER NUMBER
2827	

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/735,030	DADAFSHAR, MAJID	
	Examiner	Art Unit	
	Tuan T Dinh	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7,9-11,17 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9-11,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *15 July 2002* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

The office action mailed on 4/10/02 is hereby withdrawn.

Claim Objections

1. Claim 3 is objected to because of the following informalities:

Claim 3, line 1, please, change "the device of claim 2" to –the device of claim 1--

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-11 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoh et al. (U. S. Patent 5,521,573) in view of Raggi (U. S. Patent 5,179,365).

As to claims 1, and 5-6, Inoh discloses an electrical device as shown in figures 3-27 comprising:

a plurality of printed circuit boards (58) configured into a multi-layer (50, column 5, line 30) configuration;

at least a first printed circuit board (58) of said plurality of printed circuit boards comprising a primary winding of a transformer (N11, N12, column 6, lines 63-64);

at least a second printed circuit board (58) of said plurality of printed circuit boards comprising a secondary winding (N21, N22) of the transformer; and

a plurality of connector pins (41-42-figure 5, column 5, lines 55-57) wherein each pin (41) of the plurality of connector pins configured to electrically connect to either the primary winding or the secondary winding to a main circuit board (110).

Inoh does not disclose each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board.

Raggi shows a structure of a magnetic component (transformer) comprising a plurality of connector pins (611, 612, 616, 618, see figure 6), each connector pin (611) penetrates only the at least one first or second printed circuit board (631-635).

It would have been obvious to one ordinary skill in the art at the time the invention was made to have each of a plurality of connector pins penetrates only the at least one first or second printed circuit board as taught by Raggi to employ the electrical device of Inoh in order to provide a facilitate connecting of a multi-printed circuit board and permit to low-profile for the transformer.

As to claim 3, Inoh discloses an electrical device as shown in figures 3-27 wherein the at least one first printed circuit board (58) and the at least one second printed circuit board (58) are electrically separated from each other.

As to claim 4, Inoh discloses an electrical device as shown in figures 3-27 further comprising a connector (inner terminal 43) configured to connected the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration.

As to claim 7, Inoh discloses an electrical device as shown in figures 3-27 comprising:

a plurality of core members (30-figure 3, column 5, lines 12-13);

a plurality of printed circuit boards (58) configured to be stackable in a multi layer configuration (50, column 5, line 30) between the core members (see figure 4);

at least a first printed circuit board (58) of the plurality of printed circuit boards comprising a primary winding (N11, N12, column 6, lines 63, 64) of a transformer;

at least a second printed circuit board (58) of the plurality of printed circuit boards comprising a secondary winding (N21, N22) of the transformer;

a connection member (51; 52; 53, column 5, lines 47-49,column 6, lines 63-67) configured to selectably connect the winding on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration; and

a plurality of connector pins (41, 42-figure 5, column 5, lines 55-57) configured to electrically connect the windings on the plurality of printed circuit boards to a main circuit board.

Inoh does not disclose each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board.

Raggi shows a structure of a magnetic component (transformer) comprising a plurality of connector pins (611, 612, 616, 618, see figure 6), each connector pin (611) penetrates only the at least one first or second printed circuit board (631-635).

It would have been obvious to one ordinary skill in the art at the time the invention was made to have each of a plurality of connector pins penetrates only the at least one first or second printed circuit board as taught by Raggi to employ the electrical

device of Inoh in order to provide a facilitate connecting of a multi-printed circuit board and permit to low-profile for the transformer.

As to claim 9, Inoh discloses an electrical device as shown in figures 7, 11-15 wherein each of the plurality of printed circuit boards comprises four to six layers.

As to claim 10, Inoh discloses an electrical device as shown in figures 3-27 wherein the at least one first printed circuit board and the at least one second printed circuit board are electrically separated from each other.

As to claim 11, Inoh discloses an electrical device as shown in figures 3-27 wherein said device is configured to function as a transformer (column 5, lines 31-32).

As to claims 17-18, Inoh discloses an electrical device as shown in figures 3-27 comprising:

a plurality of core members (30);

a plurality of printed circuit boards (58), positioned between the plurality of core members (30), wherein the plurality of printed circuit boards are stackable into a multi-layer configuration;

at least one coil (58) defined on each of the plurality of layers of the plurality of printed circuit boards;

at least a first printed circuit board of the plurality of printed circuit boards comprising a primary winding (N11, N12) of a transformer;

at least a second printed circuit board of the plurality of printed circuit boards comprising a secondary winding (N21, N22) of a transformer;

a connection member (51) configured to connect the windings on at least two of the plurality of printed circuit boards in either a parallel or a series electrical configuration (column 6, lines 63-67); and

a plurality of connector pins (41, 42) configured to electrically connect the plurality of printed circuit boards to the main circuit board.

Inoh does not disclose each pin of the plurality of connector pins penetrates only the at least one first printed circuit board or the at least one second printed circuit board.

Raggi shows a structure of a magnetic component (transformer) comprising a plurality of connector pins (611, 612, 616, 618, see figure 6), each connector pin (611) penetrates only the at least one first or second printed circuit board (631-635).

It would have been obvious to one ordinary skill in the art at the time the invention was made to have each of a plurality of connector pins penetrates only the at least one first or second printed circuit board as taught by Raggi to employ the electrical device of Inoh in order to provide a facilitate connecting of a multi-printed circuit board and permit to low-profile for the transformer.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 3-7, 9-11, and 17-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Neuber and Iganawa disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
September 24, 2002.

A.W. Paladini 9-30-02

ALBERT W. PALADINI
PRIMARY EXAMINER